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ABSTRACT

Noting that good reading comprehension is aided by the reader's attention to text organization, this paper presents a rationale and method for teaching students to map content materials. The paper begins by noting research demonstrating that good comprehenders attend to text organization. It then briefly reviews research related to the impact on comprehension of teaching content mapping strategies to students from the middle grades through college. Finally, the paper presents a method and sequence for teaching students to map content materials, and provides frameworks and examples for mapping passages with some common organizational patterns. (HTH)

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# *Strategies for Mapping Content Texts*

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*Running Head: MAPPING CONTENT*

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## Abstract

This paper begins by noting research which demonstrates that good comprehenders attend to text organization. Research related to the impact on comprehension of teaching content mapping strategies to students from the middle grades through college is briefly reviewed. The author then presents a method and sequence for teaching students to map content materials, and provides frameworks and examples for mapping passages with some common organizational patterns.

## Strategies for Mapping Content Texts

Reading instruction at the middle school through college levels is aimed at developing and refining students' reading comprehension skills. One skill important to good comprehension is ability to attend to the organization or structure of a passage. Recent research (Bartlett, 1978; Meyer, 1979; Meyer, Brandt, & Bluth, 1980) has demonstrated that good readers use the author's organization when recalling what they have read while poor readers don't, and that readers who follow the structure of a text have better immediate and long term recall of what has been read than readers who do not. Outlining passages to show the structure or organization graphically is referred to as mapping or networking. Instruction in mapping or networking has been shown to improve the comprehension and recall of students from middle school through adult levels (Armbruster & Anderson, 1980; Dansereau et al., 1979; Grisky, 1982). The remainder of th's article provides suggestions and sample materials for teaching students to map content passages. The materials are based on Griskey's (1982).

Before students will be able to successfully map content passages they must recognize the organizational patterns (e.g., temporal or chronological order, comparison/contrast, cause/effect) they are to learn to map, both when the author uses signal words (e.g., because, however, then) to make relationships between and among ideas explicit and when the author does not. Begin teaching

mapping by having students map concepts, terms and their meanings, explained in a single sentence. Then add passages in which concepts are explained, characteristics given, and then examples of the concept given. From this move to teaching students to map passages with a taxonomic organization in which related concepts are explained. When students can do this and recognize the other organizational patterns, you may teach mapping of the other major organizational patterns. For each organizational pattern:

1. Provide examples of completed maps for passages in which the relationship between ideas is clearly stated then for passages in which the relationship is less clearly stated.
2. Discuss the passages and maps.
3. Provide similar passages and with and without map frames for students to map.
4. Discuss passages and student maps.
5. Assign passages in a classroom text for mapping.
6. Discuss passages and student maps.

Here are examples of materials that might be used to teach mapping concepts, and mapping concepts and characteristics:

## Mapping Concepts

### Examples

1. Introspection is the self-examination of thoughts and sensations.

| INTROSPECTION |
| --- |
| IS self-examination of thoughts and sensations |

2. Simulations operate as models and imitate real-life situations.

| SIMULATION |
| --- |
| IS model imitating real-life situation |

### You Try

3. Words formed using the beginning letters from other words are called acronyms.

| |
| --- |
| |

4. Shelters cover and offer protection.

## Mapping Your Text

5. Hardware, software, and peripherals are three important terms your author explains in chapter 2. Locate these terms in the chapter. Read your author's explanations and map these concepts.

### Concepts and Characterstics

### Examples

1. A cow is a mature female of any breed of cattle. Cows give milk and usually live on farms.

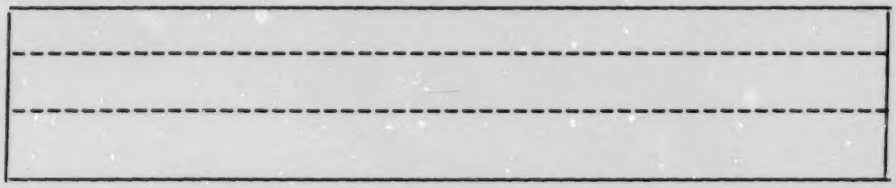
| COW |
| --- |
| IS mature female cattle |
| give milk |
| usually live on farm |

2. Software, the instructions or programs that tell the computer what to do, is stored on tapes or disks.

| SOFTWARE |
| --- |
| IS computer instructions or programs |
| stored on tapes or disks |

You Try

3. A book is a set of sheets of paper bound together on one side and encased between protective covers. The pages in a book are usually written on.



4. The letters in an acronym, a word formed from the beginning letters of other words, may be pronounced individually or as a unit.

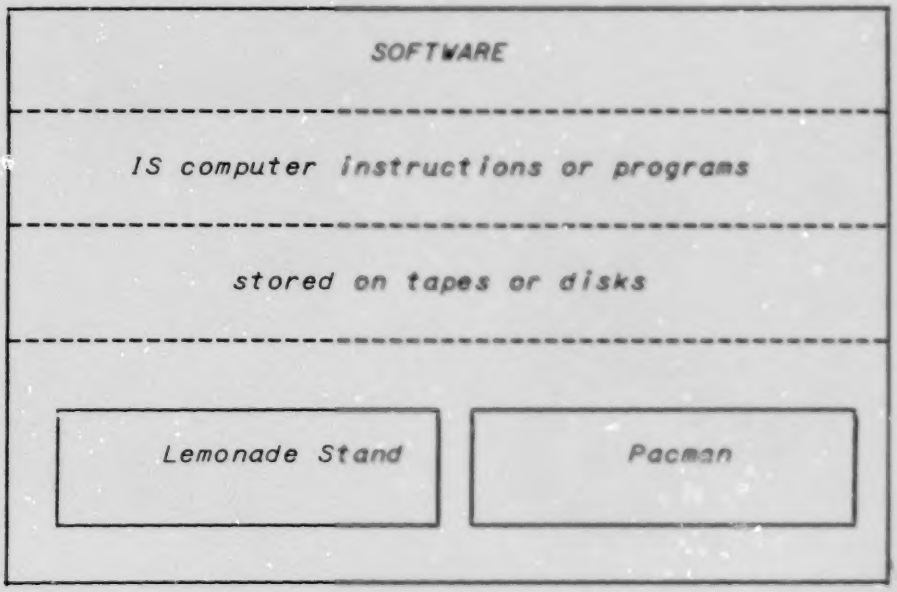
Mapping Your Text

5. In chapter 13 your authors define and give the characteristics of three climates; continental subarctic, marine subarctic, and tundra. Read that chapter and map these concepts, including both definitions and characteristics of each climate.

To teach students to map the major organizational patterns found in content materials, you would follow the sequence previously outlined and use materials following the pattern illustrated in the previous, complete, examples. The following are examples of maps of materials for concepts, characteristics, and examples; and for the major organizational patterns found in expository text:

## Concepts, Characteristics, and Examples

Software, the instructions or programs that tell the computer what to do, is stored on tapes or disks. "Lemonade Stand" and "Pacman" are computer software.




## Taxonomic Organization

In a taxonomy related concepts are explained. Characteristics and examples of each may be given.

Plants have three major parts; roots, stems, and leaves. Roots are underground. They hold the plant in place, and take in moisture and food from the earth. Stems, usually slender stalks, transmit moisture and food from the roots to the leaves. Leaves, which are attached to the stems, are the part of the plant which takes in the sunlight necessary for photosynthesis.

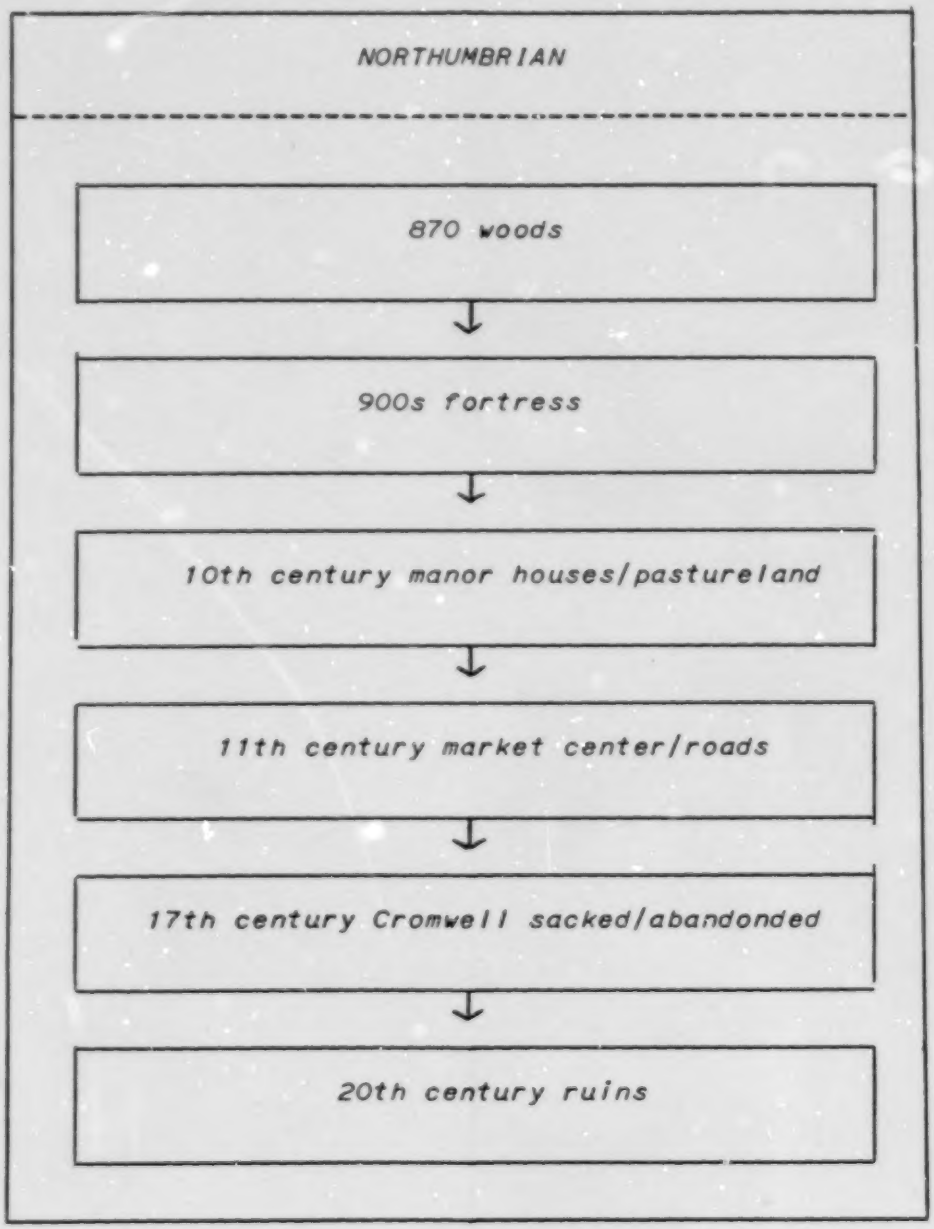
| MAJOR PLANT PARTS | | |
|---|---|---|
| ROOT | STEM | LEAF |
| IS takes in moisture and food; holds plant in place | IS transports moisture and food to leaves | IS takes in sunlight for photo-synthesis |
| underground | slender | attached to stem |

## Temporal Organization

This type of organization gives information about sequence, or the time that events occur in relation to other events. Events are not always mentioned in order. This organization includes procedural information such as directions.

Where the ruins of Northumbrian are today was thick woods until about 870. In the 900s part of the woods was cleared and a fortress was built. During the late 10th century manor houses were built around the fortress and

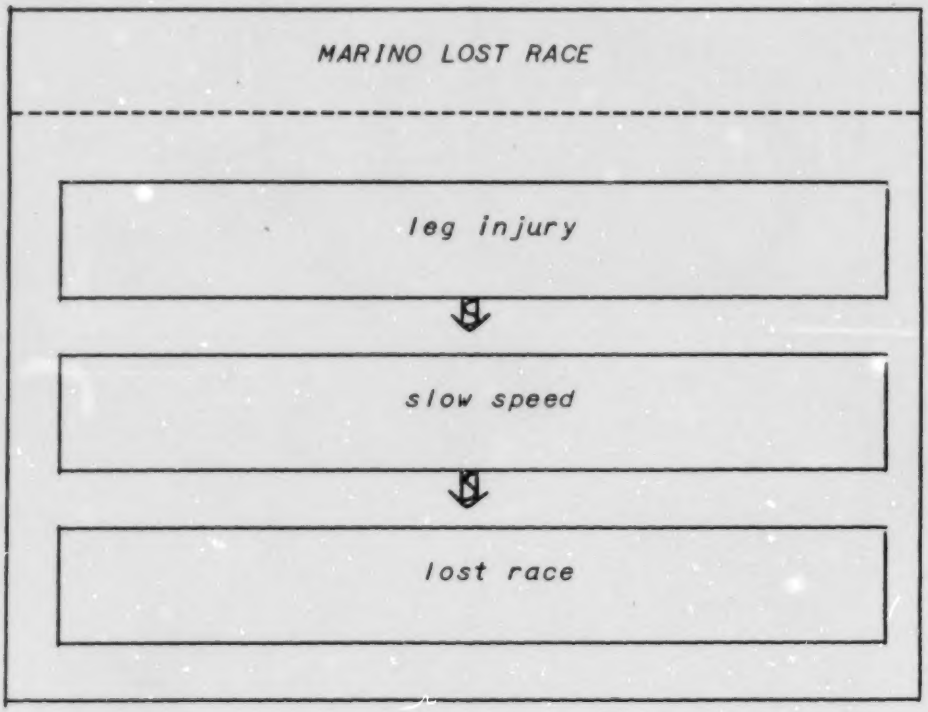
pastureland was cleared. In the 11th century Northumberian became a market center and roads to it were built from neighboring villages. The 17th century saw Cromwell sack the town which was then abandonded.



## Cause and Effect Organization

This type of organization relates causes and effects. Causes are not always stated before effects.

Marino lost the race because his recent leg injury slowed him down.

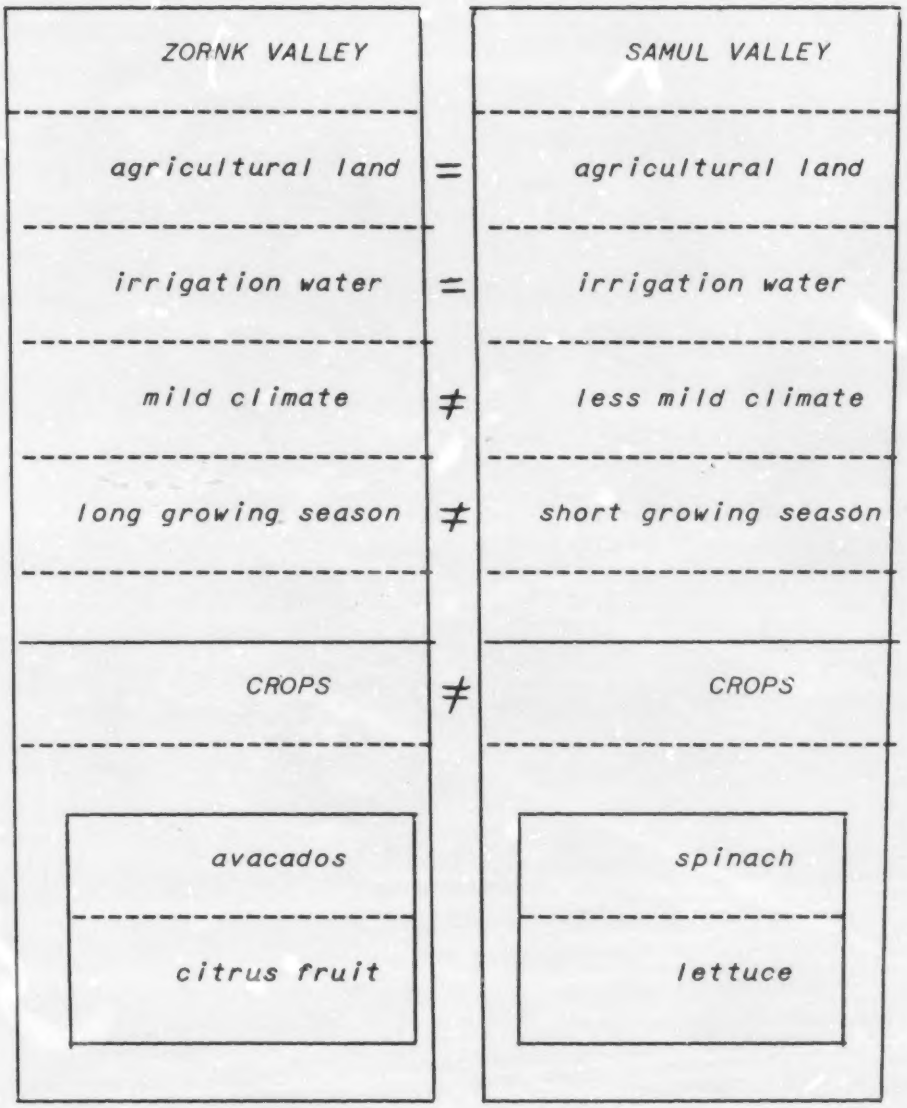



## Comparison/Contrast Organization

This type of organization gives information about likenesses and differences between and among concepts. Sometimes only likenesses or differences are given.

The central valleys of Zornk and Samul are alike in some ways. Both have many acres of agricultural land and water available for irrigation. However, Zornk has a milder climate and longer growing season than Samul. The major crops grown in the mild Zornk valley are avacados

and citrus fruits, while Samul's major crops are spinach and lettuce.




It is not clear whether having students map content materials improves their comprehension and recall because it requires them to attend to the organizational patterns or because the process of mapping causes more in-depth processing (see Craik & Lockhart, 1972). What is clear is

that it works! Teach your students to map the various organizational patterns found in content texts. Then encourage or require mapping of materials in your texts with which students usually have difficulty; provide time and help for poorer students to map crucial portions of your class texts. You should see all students comprehending and remembering more from the text materials you consider important.

## References

Armbruster, B., and Anderson, T. (1980). The effect of mapping on free recall of expository test (Tech. Rep. 160). Urbana, Ill.: University of Illinois, Center for the Study of Reading.

Bartlett, B. (1978). Top-level structure as an organizational strategy for recall of classroom text. Unpublished doctoral dissertation, Arizona State University, Arizona.

Craik, F., and Lockhart, R. (1972). Levels of processing: A framework for memory research. Journal of Verbal Learning and Verbal Behavior , 11 , 671-684.

Densereau, D., Collins, K., McDonald, B., Holley, C., Garland, J., Diekhoff, G., and Evans, S. (1979). Development and evaluation of a learning strategy training program. Journal of Educational Psychology , 71 , 64-73.

Grisky, P. (1982, October). Mapping textbook content . Paper presented at the 26th annual conference of the College Reading Association. Philadelphia, Pa.

Meyer, B. (1979). Organizational patterns in prose and their use in reading. In M. Kamil and M. Moe (Eds.), Reading research: Studies and applications . . Rochester, N.Y.: The National Reading Conference.

Meyer, B., Brandt, D., and Bluth, G. (1980). Use of top-level structure in text: Key for reading comprehension of ninth-grade students. Reading Research Quarterly , 16 , 72-103.